

4. The method of claim 3, wherein a metal organic material is used as a source of the CVD method

6. (Once amended) The method of claim 4, wherein the pre-annealing does not substantially change the materiality of the lower electrode.

Claim 5 is cancelled.

7. (Once amended) The method of claim 4, wherein the step of forming a capacitor dielectric layer comprises:
forming a capacitor dielectric layer on the pre-annealed lower electrode; and
subjecting the capacitor dielectric layer to a crystallization annealing, wherein a processing temperature of the pre-annealing is higher than that of the crystallization annealing.

8. (Once amended) The method of claim 6, wherein the pre-annealing is performed at a range of between 350 ~ 499°C.

9. (Once amended) The method of claim 4, wherein the selected atmosphere comprises a hydrogen gas.

10. (Once amended) The method of claim 4, wherein the selected atmosphere comprises a nitrogen gas.

11. (Once amended) The method of claim 4, wherein the selected atmosphere is a mixed atmosphere.

12. The method of claim 11, wherein the mixed atmosphere comprise a hydrogen and a nitrogen gas.

13. (Once amended) A method of fabricating a semiconductor device, comprising the steps of:
forming a lower electrode on a substrate;

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subjecting the lower electrode to a pre-annealing, wherein the pre-annealing is a treatment exposing the lower electrode under a plasma atmosphere;
forming a capacitor dielectric layer on the pre-annealed lower electrode, wherein the capacitor dielectric layer is formed of a crystalline material; and
forming an upper electrode on the capacitor dielectric layer.

14. (Once amended) The method of claim 13, wherein the lower electrode is formed of a material selected from the group consisting of a metal and a metal oxide, and the lower electrode is formed by a CVD method.

15. The method of claim 14, wherein a metal organic material is used as a source of the CVD method

Claim 16 is cancelled.

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17. (Once amended) The method of claim 15, wherein the pre-annealing does not substantially change the materiality of the lower electrode.

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18. (Once amended) The method of claim 15, wherein the step of forming a capacitor dielectric layer comprises:
forming a capacitor dielectric layer on the pre-annealed lower electrode; and
subjecting the capacitor dielectric layer to a crystallization annealing, wherein a processing temperature of the pre-annealing is higher than that of the crystallization annealing.

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19. (Once amended) The method of claim 15, wherein the plasma atmosphere comprises a hydrogen gas.

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20. (Once amended) A method of fabricating a semiconductor device, comprising the steps of:

forming a lower electrode on a substrate, wherein the lower electrode is formed by a CVD method, and wherein the lower electrode is formed of a material selected from the group consisting of a metal and a metal oxide;

subjecting the lower electrode to a pre-annealing;

forming a capacitor dielectric layer on the pre-annealed lower electrode, wherein the capacitor dielectric layer is formed of a crystalline material; and
forming an upper electrode on the capacitor dielectric layer.

21. (Once amended) The method of claim 20, wherein the pre-annealing is one selected from the group consisting of a thermal annealing under a selected atmosphere and a treatment exposing the lower electrode under a plasma atmosphere.

Claim 22 is cancelled.

23. (Once amended) The method of claim 21, wherein the pre-annealing does not substantially change the materiality of the lower electrode.

24. (Once amended) The method of claim 21, wherein the step of forming a capacitor dielectric layer comprises:
forming a capacitor dielectric layer on the pre-annealed lower electrode; and
subjecting the capacitor dielectric layer to a crystallization annealing, wherein a processing temperature of the pre-annealing is higher than that of the crystallization annealing.

25. The method of claim 24, wherein the processing temperature of crystallization annealing is about 650°C.

26. The method of claim 21, wherein the selected atmosphere comprises a hydrogen gas and the thermal annealing is performed at about 450°C.

27. The method of claim 21, wherein the selected atmosphere comprises a nitrogen gas and the thermal annealing is performed at about 700°C.

28. The method of claim 21, wherein the selected atmosphere is a mixed atmosphere including about 90% of nitrogen and about 10% of hydrogen by volume.

29. The method of claim 28, wherein the thermal annealing is performed at about 450°C.

30. (New) The method of claim 8, wherein the pre-annealing is performed at about 450°C.

31. (New) The method of claim 17, wherein the pre-annealing is performed at a range of between 350 ~ 499°C. *new matter*

32. (New) The method of claim 31, wherein the pre-annealing is performed at about 450°C.
